We claim:

1. An optical pulse source for generating RZ pulses at a wavelength λ comprising:

a modulated light source for generating optical pulses of light over an optical spectrum including λ, the source modulated in power and frequency;

5   a Bragg grating having a filter response, the grating coupled to the light source and stabilized so that the filter response is over a range overlapping at least part of the optical spectrum of the source;

one or more optical taps coupled to the light source and the Bragg grating for tapping a signal representative of the light supplied to the grating and a signal 10   representative of the light reflected or transmitted by the grating; and,

a feedback circuit responsive to the tapped signals for adjusting the wavelength λ of the light source.

2. The optical pulse source of claim 1 wherein the feedback circuit adjusts the shape of 15   pulses passing through the filter to produce RZ pulses.

3. The optical pulse source of claim 1 wherein the light source comprises a distributed feedback laser.

20   4. The optical pulse source of claim 1 wherein the Bragg grating is coupled to the source by polarization maintaining optical fiber.

5. The optical pulse source of claim 1 wherein the Bragg grating comprises a fiber Bragg grating stabilized by disposition in a controlled temperature environment..

6. The optical pulse source of claim 1 wherein the Bragg grating is tunable

7. The optical pulse source of claim 1 wherein the one or more optical taps comprise a
5   directional tap.

8. The optical pulse source of claim 1 wherein the one or more optical taps comprises a
tilted fiber grating.

10   9. The optical pulse source of claim 1 wherein the one or more optical taps comprise a
fiber coupler.

10. The optical pulse source of claim 1 wherein the light source comprises a
temperature adjustable distributed feedback laser and the feedback circuit comprises an
15   electronic circuit responsive to the tapped signals for adjusting the temperature of the
laser.